Date: Fri, 24 Dec 93 04:30:14 PST
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: Bulk
Subject: Ham-Ant Digest V93 #152
To: Ham-Ant

Ham-Ant Digest Fri, 24 Dec 93 Volume 93 : Issue 152

Today's Topics:

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

Date: Thu, 23 Dec 1993 15:10:19 GMT
From: library.ucla.edu!europa.eng.gtefsd.com!howland.reston.ans.net!
news.intercon.com!udel!news.sprintlink.net!direct!news.direct.net!
kg7bk@network.ucsd.edu
Subject: 2M from 11M Question.
To: ham-ant@ucsd.edu

Brian Pollack (wizkid@indirect.com) wrote:
: (And is it a good idea, assuming a magmount 11M is very cheap
: and at every hamfest.) -Brian KB7TSY

Hi Brian,

It will probably be lossy on 2m. The coax is lossy and the 3/8" mount
is lossy on vhf. Your word "cheap" describes it well. However, it would

probably work better than a rubber duck inside the car.

MFJ has a dual band mobile vhf/uhf mag mount antenna for $15 which is
inexpensive and is probably better than 11m stuff.

73, Cecil, kg7bk@indirect.com Queen Creek, AZ

Date: 22 Dec 1993 13:59:38 GMT
From: ucsnews!sol.ctr.columbia.edu!math.ohio-state.edu!mane.cgrg.ohio-state.edu!
aus1.robins.af.mil!wrdis02.robins.af.mil!gwood@network.ucsd.edu
Subject: 6m antenna help
To: ham-ant@ucsd.edu

need help on building a 6m quad 2,3,4, elelmen for use on packet
ssb,fm,am if any one can help me with a good book or design it would
just great.

--

KC4YBL
GREG WOOD
EM82

Date: 22 Dec 1993 13:55:41 GMT
From: ucsnews!sol.ctr.columbia.edu!math.ohio-state.edu!mane.cgrg.ohio-state.edu!
aus1.robins.af.mil!wrdis02.robins.af.mil!gwood@network.ucsd.edu
Subject: 6m antenna help
To: ham-ant@ucsd.edu

need help on building a 6m quad about 2,3,4, element as long as i has
a good 9,8 db or higher i would like to be able to us it on
ssb,packet,am ,fm,.if anyone out there can help me out with a good
book or design.

--

GREG WOOD
kc4ybl
em82

Date: 22 Dec 1993 15:46:33 GMT
From: ucsnews!sol.ctr.columbia.edu!math.ohio-state.edu!mane.cgrg.ohio-state.edu!
aus1.robins.af.mil!wrdis02.robins.af.mil!gwood@network.ucsd.edu
Subject: 6m antenna help
To: ham-ant@ucsd.edu

i would like to get some help on building a 6m quad for
packet,fm,ssb,am,cw i would like it have at least 3,4,5 elements
any books that might help or a design would be a big help
--

GREG WOOD
kc4ybl
em82

Date: 23 Dec 93 11:27:13 GMT
From: ogicse!psgrain!news.clark.edu!pacifier!ronh@network.ucsd.edu
Subject: Annonymous FTP Ham Sites?
To: ham-ant@ucsd.edu

I amm looking for a few good clues to your favorite, and best Anonymous FTP
sites for Ham and SW programs. Working on my ticket, and like to collect
Radio programs, antenna programs and the like. Please send reply E-Mail, as
my news server glitches from time to time. Thanks much in advance!
Happy holidays to all!!
Ron Hays
:wq

Date: Wed, 22 Dec 93 09:39:14 CST
From: library.ucla.edu!agate!iat.holonet.net!vulcan!gary@network.ucsd.edu
Subject: Antenna Tuner Questions
To: ham-ant@ucsd.edu

alanb@sr.hp.com (Alan Bloom) writes:

> Cecil Moore (kg7bk@indirect.com) wrote:
>
> : I need the equations governing the

> : transfer function of a voltage and/or current balun that is not arcing
> : and/or saturating. I can't find them in W2FMI's book, Maxwell's book, or
> : any of the ARRL publications that I own. Where the heck are they?
>
> Ideally, the transfer function for a 4:1 balun is R(load) = 4 * R(source)
> and X(load) = 4 * X(source), assuming the load is connected to the
> "4" side of the balun.
>
> Or perhaps you meant you want to calculate the power-handling capability
> with high SWR. The easy answer to that question is to assume that a balun
> designed for the amateur limit can handle 1.5 kW (plus some margin) into
> a 50 ohm load. The worst-case voltage or current will be multiplied by
> the square root of the SWR. (High-impedance loads increase the voltage,
> low-Z loads increase the current.)
>
> The upshot of this is that, under worst-case conditions, the power
> rating is degrated by a factor equal to SWR. For example, if the
> SWR is 3:1, you can safely use your 1.5 kW balun at 500 watts
> without arcing the windings or saturating the core.
>
> AL N1AL
>

Is the transfer function really this simple ? As a first-order
estimate, I disagree. I think the balun has distributed R, L, G, & C and
therefore looks like both a transmission line and a transformer.

A good place to start (if you really want to chaaracterize a balun) would
be the Fall 1992 Communications Quarterly. An article by Jerry Sevick
discusses two different models for baluns. I think, though, that if you
are wanting to derive a transfer function, you will have to go review
some of the references cited in the article.

I think that a transfer function will ultimately depend on the physical
makeup of the balun of interest, as well as the frequency at which it is
used.

Good Luck.

--

Gary Tennyson   BellSouth Telecommunications, Inc.

Internet: gary@vulcan.com

Date: Thu, 23 Dec 1993 17:56:12 GMT

From: library.ucla.edu!europa.eng.gtefsd.com!howland.reston.ans.net!
vixen.cso.uiuc.edu!sdd.hp.com!col.hp.com!csn!boulder!dosstudent.Colorado.EDU!
millerpe@network.ucsd.edu
Subject: Better Gain antenna for HT?
To: ham-ant@ucsd.edu

I need suggestions for a HT antenna that has better that 1 dB gain and
is still flexable. I am looking for a rubber-whip-type that is not longer
than 20".

Thanx in advance

millerpe@spot.colorado.edu

Date: 23 Dec 1993 08:55:28 -0800
From: swrinde!gatech!howland.reston.ans.net!agate!library.ucla.edu!
news.mic.ucla.edu!unixg.ubc.ca!nntp.cs.ubc.ca!cyber2.cyberstore.ca!
vanbc.wimsey.com!vanbc.wimsey.com!not-for-mail@network.ucsd.
Subject: Hustler Mobile as Base Antenna
To: ham-ant@ucsd.edu

In article <CICEBn.Bo6@rd1.interlan.com>,
Victor Tavernini <tavernin@sun1.interlan.com> wrote:
>I happen to have a Hustler mobile antenna and a 40 meter resonator ...
>and was wondering ... is it possible to use it as a base anteenna?

You could, but the efficiency of the antenna is probably less than 10% of
a dipole.
>
>If so, would I need to add radials?

The more the better, but it may also shift the resonance frequency of the
antenna a little.

73 & Seasons Greetings de VE7MDL   ....Erik.
>
>Thanks,
>
>Victor Tavernini
>Racal-Datacom, Inc.
>
>tavernin@sun1.interlan.com

Date: 14 Dec 93 01:16:50 GMT
From: dog.ee.lbl.gov!agate!howland.reston.ans.net!sol.ctr.columbia.edu!
usenet.ucs.indiana.edu!silver.ucs.indiana.edu!djadams@ucbvax.berkeley.edu
Subject: The ant farm
To: ham-ant@ucsd.edu

Greetings! Has anone used the MB-2a from the ant farm...sounds a bit to

too good to be true...

73 de Dave, N9UXU
David J Adams, N9UXU Internet: djadams@silver.ucs.indiana.edu
Amiga User and Flow Cytometry Advocate
Looking for a mobile 2m and/or 70cm rig
Conure Society of America. "Push the button Frank..."
--- -. .-.. -.--   .- -- .. --. .-

Date: 23 Dec 93 18:53:04 GMT
From: ogicse!uwm.edu!cs.utexas.edu!math.ohio-state.edu!darwin.sura.net!
fconvx.ncifcrf.gov!mack@network.ucsd.edu
Subject: Vertical Antenna Question
To: ham-ant@ucsd.edu

In article <CIHy76.K8D@SSD.intel.com> rlt@ssd.intel.com (Roger Traylor) writes:
>I have a vertical antenna question. In most explainations of how
>a typical vertical antenna works, a picture is shown of a 1/4 wave
>vertical with its image projecting into the earth. (assuming ground
>mounted antenna) I have a situation that would place my vertical
>antenna directly over an irrigation well which is about 30 ft deep.
>My frequency of interest here is 7Mhz. There is water in about the
>last 15 feet of the well.
>
>My question is: If I can drop a ~30 foot wire down the well as the
>1/4 wave image, will a substantial ground radial system still be
>required? Would this work at all?
>
>Thanks,
>
>Roger Traylor
There's a couple of things here - the image about from using an infinite
ground plane. The 1/4wave radials are resonant and provide a choke to
stop the current from going down the outside of the coax. They also act as
the terminating point for the field lines originating in the vertical, so there
deployment (angle to the vertical etc) affects impedance. Alsothe raidals
need to be dense enough that the physical ground (the dirt) doesn't intercept
the field lines and you don't heat up the dirt. Quarter wave radials act

similarly to an infinite ground plane although comeone else will have to explain it - I don't understand that point.
 You wire down the well will not stop the currents going down the out-side of the coax and it will not prevent your power heating up the ground. It wou;d be better to lay your one radial along the ground (I think).
However there is no requirement for your vertical to be above ground. I have read tht the military has thoughtor has done occassionally, buried their vertical downwards and used this to radiate. So you could have your usual radials and throw a wire down the well. There are some minor points that I don't remember like why you aren't heating up the dirt and how the signal gets above ground. I didn't pay much attention to this as I never thought I'd be making one.
 Joe NA3T
 mack@ncifcrf.gov

Date: Thu, 23 Dec 1993 16:37:54 GMT
From: library.ucla.edu!europa.eng.gtefsd.com!howland.reston.ans.net!sol.ctr.columbia.edu!news.kei.com!ssd.intel.com!rlt@network.ucsd.edu
Subject: Vertical Antenna Question
To: ham-ant@ucsd.edu

I have a vertical antenna question. In most explainations of how a typical vertical antenna works, a picture is shown of a 1/4 wave vertical with its image projecting into the earth. (assuming ground mounted antenna) I have a situation that would place my vertical antenna directly over an irrigation well which is about 30 ft deep. My frequency of interest here is 7Mhz. There is water in about the last 15 feet of the well.

My question is: If I can drop a ~30 foot wire down the well as the 1/4 wave image, will a substantial ground radial system still be required? Would this work at all?

Thanks,

Roger Traylor
--
 Roger Traylor
 rlt@ssd.intel.com
 Intel Corporation - Supercomputer Systems Division
 Beaverton, OR 97006

Date: Thu, 23 Dec 1993 17:08:20 GMT
From: swrinde!cs.utexas.edu!howland.reston.ans.net!gatech!usenet.ufl.edu!

mlb.semi.harris.com!controls.ccd.harris.com!drs@network.ucsd.edu
Subject: Vertical Antenna Question
To: ham-ant@ucsd.edu

Roger Traylor (rlt@ssd.intel.com) wrote:
: I have a vertical antenna question. In most explainations of how
: a typical vertical antenna works, a picture is shown of a 1/4 wave
: vertical with its image projecting into the earth. (assuming ground
: mounted antenna) I have a situation that would place my vertical
: antenna directly over an irrigation well which is about 30 ft deep.
: My frequency of interest here is 7Mhz. There is water in about the
: last 15 feet of the well.

: My question is: If I can drop a ~30 foot wire down the well as the
: 1/4 wave image, will a substantial ground radial system still be
: required? Would this work at all?

Roger, I think you would end up with an antenna that is marginal at best.
You will probably get some explanations from technical experts but from
a practical aspect, either elevate the vertical from the ground as far as
you can (example, I have a full size 40 meter ground plane 20' off the gnd).
If you elevate it, your losses will diminish greatly. Otherwise, put down
as many radials on the ground as you can. The more the better. I don't know
of many more choices for a 1/4 wave vertical. 73's Doug, N4IJ

: Thanks,

: Roger Traylor
: --
: Roger Traylor
: rlt@ssd.intel.com
: Intel Corporation - Supercomputer Systems Division
: Beaverton, OR 97006

End of Ham-Ant Digest V93 #152
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